IN THE CLAIMS:

Please cancel claims 5 and 39, without prejudice, and amend the following claims:

1. (Amended) A method of treating a substrate surface comprising copper or a copper alloy, the method comprising:

applying to the substrate surface a composition comprising:

one or more chelating agents, wherein the one or more chelating agents comprise an acid and a base;

one or more pH adjusting agents to produce a pH between about 3 and about 11; and

deionized water; and then

applying a corrosion inhibitor solution.

- 2. The method according to claim 1, further comprising treating the substrate surface with a corrosion inhibitor solution prior to treating the substrate surface with the composition.
- 3. The method according to claim 2, wherein the corrosion inhibitor solution comprises between about 0.01 wt.% and about 0.50 wt.% corrosion inhibitor and deionized water.
- 4. The method according to claim 3, wherein the corrosion inhibitor is selected from the group of benzotriazole, 5-methyl-1-benzotriazole, and combinations thereof.
- 5. (Cancelled) The method according to claim 5, wherein the one or more chelating agents comprise an acid, a base, or a combination thereof.
- 6. (Amended) The method according to claim 1, wherein the one or more chelating agents comprising an acid has a concentration of up to about 40 wt.% of the composition.



- 7. The method according to claim 6, wherein the acid is a carboxylic acid having one or more acid groups.
- 8. The method according to claim 7, wherein the acid is selected from the group of acetic acid, citric acid, maleic acid, and combinations thereof.
- 9. (Amended) The method according to claim 1, wherein the one or more chelating agents comprising a base has a concentration up to about 5 wt.% of the composition.
 - 10. The method according to claim 1, wherein the base comprises between about 0.5 wt.% and about 3 wt.% of the composition.
 - 11. The method according to claim 9, wherein the base is selected from the group of ammonium hydroxide, ammonium hydroxide derivatives, amines, and combinations thereof.
 - 12. The method according to claim 1, wherein the composition further comprises a corrosion inhibitor.
 - 13. The method according to claim 12, wherein the corrosion inhibitor comprises between about 0.01 wt.% and about 0.50 wt.% of the composition.
 - 14. The method according to claim 12, wherein the corrosion inhibitor is selected from the group of benzotriazole, 5-methyl-1-benzotriazole, and combinations thereof.
 - 15. The method according to claim 1, wherein the composition comprises up to about 40 wt.% citric acid, up to about 5 wt.% ammonium hydroxide, the remainder deionized water.

- 16. The method according to claim 1, wherein the composition has a pH between about 4 and about 5 and comprises between about 5 wt.% and about 30 wt.% citric acid, between about 0.5 wt.% and about 3.0 wt.% ammonium hydroxide.
- 17. The method according to claim 2, wherein the corrosion inhibitor solution is applied prior to treating the substrate surface with the composition for between about 3 and about 10 seconds.
- 18. The method according to claim 1, wherein the composition is applied between about 10 and about 20 seconds.
- 19. The method according to claim 1, wherein the composition further comprises a reducing agent.
- 20. The method according to claim 19, wherein the reducing agent comprises between about 0.01 wt.% and about 20 wt.% of the composition.
- 21. The method according to claim 19, wherein the reducing agent is selected from the group of hydroxylamine, glucose, sulfothionate, potassium iodide, and combinations thereof.
- 22. The method according to claim 1, wherein the corrosion inhibitor solution comprises between about 0.01 wt.% and about 0.50 wt.% corrosion inhibitor and deionized water.
- 23. The method according to claim 22, wherein the corrosion inhibitor is selected from the group of benzotriazole, 5-methyl-1-benzotriazole, and combinations thereof.
- 24. The method according to claim 22, wherein the corrosion inhibitor solution is applied between about 3 and about 10 seconds.

- 25. The method according to claim 1, wherein the one or more pH adjusting agents are selected from the group of a non-oxidating inorganic acid, a non-oxidating organic acid, a non-oxidating inorganic base, a non-oxidating organic base, and combinations thereof.
- 26. The method according to claim 1, wherein the one or more pH adjusting agents comprise an acidic chelating agent, a basic chelating agent or a combination thereof.
- 27. (Amended) A method of planarizing a substrate surface containing an dielectric layer having an upper surface and at least one opening, a barrier layer lining the opening and the upper surface of the dielectric layer, and copper or a copper alloy filling the opening and on the dielectric layer, the method comprising:

removing the copper or copper alloy layer and the barrier leaving an exposed substrate surface comprising copper or copper alloy in the opening; and

treating the exposed substrate surface comprising copper or the copper alloy by applying thereto a composition comprising one or more chelating agents, one or more pH adjusting agents to produce a pH between about 3 and about 11, and deionized water, wherein the one or more chelating agents comprise an acid and a base; and then applying a corrosion inhibitor solution.

- 28. The method according to claim 27, further comprising removing the barrier layer after removing the copper or copper alloy layer and prior to chemically treating the exposed substrate surface.
- 29. The method according to claim 27, wherein removing the copper or the copper alloy layer comprises chemical-mechanical polishing (CMP) the copper or the copper alloy layer.
- 30. The method according to claim 29, wherein the method comprises: removing the copper or copper alloy layer and stopping on the barrier layer;



removing the barrier layer and leaving the exposed substrate surface comprising copper or copper alloy features.

- 31. The method according to claim 27, wherein:
 the dielectric layer comprises a silicon oxide; and
 the barrier layer comprises tantalum (Ta) or tantalum nitride (TaN).
- 32. The method according to claim 27, wherein the method comprises chemically treating the exposed substrate surface comprising copper or the copper alloy layer to remove a portion of the substrate surface of the copper or copper alloy or to remove corrosion stains from the copper or copper alloy substrate surface.
- 33. The method according to claim 32, wherein the method comprises chemically removing up to about 50Å from the exposed substrate surface comprising copper or the copper alloy.
- 34. The method according to claim 27, further comprising treating the substrate surface with a corrosion inhibitor solution prior to applying the composition.
- 35. The method according to claim 27, wherein the composition comprises deionized water, citric acid and ammonium hydroxide.
- 36. The method according to claim 27, wherein the method comprises: mounting the substrate on a carrier in a CMP apparatus;
 CMP the substrate using a polishing pad;
 performing the initial treating step;
 applying the composition; and
 applying the corrosion inhibitor solution while separating the substrate from the polishing pad.

- 37. The method according to claim 34, wherein the corrosion inhibitor solution comprises between about 0.01 wt.% and about 0.50 wt.% corrosion inhibitor and deionized water.
- 38. The method according to claim 37, wherein the corrosion inhibitor is selected from the group of benzotriazole, 5-methyl-1-benzotriazole, and combinations thereof.
- 39. (Cancelled) The method according to claim 27, wherein the one or more chelating agents comprise an acid, a base, or a combination thereof.



- 40. (Amended) The method according to claim 27, wherein the one or more chelating agents comprising an acid has a concentration of up to about 40 wt.% of the composition.
- 41. The method according to claim 40, wherein the acid is a carboxylic acid having one or more acid groups.
- 42. The method according to claim 41, wherein the acid is selected from the group of acetic acid, citric acid, maleic acid, and combinations thereof.
- 43. The method according to claim 27, wherein the base comprises up to about 5 wt.% of the composition.
- 44. The method according to claim 43, wherein the base comprises between about 0.5 wt.% and about 3 wt.% of the composition.
- 45. The method according to claim 43, wherein the base is selected from the group of ammonium hydroxide, ammonium hydroxide derivatives, amines, and combinations thereof.

- 46. The method according to claim 27, wherein the composition further comprises a corrosion inhibitor.
- 47. The method according to claim 46, wherein the corrosion inhibitor comprises between about 0.01 wt.% and about 0.50 wt.% of the composition.
- 48. The method according to claim 46, wherein the corrosion inhibitor is selected from the group of benzotriazole, 5-methyl-1-benzotriazole, and combinations thereof.
- 49. The method according to claim 27, wherein the composition comprises up to about 40 wt.% citric acid, up to about 5 wt.% ammonium hydroxide, and the remainder of the composition comprises deionized water.
- 50. The method according to claim 49, wherein the composition has a pH between about 4 and about 5 and comprises between about 5 wt.% and about 30 wt.% citric acid, between about 0.5 and about 3.0 wt.% ammonium hydroxide.
- 51. The method according to claim 34, wherein the corrosion inhibitor solution is applied between about 3 and about 10 seconds prior to treating the substrate surface with the composition.
- 52. The method according to claim 27, wherein the composition is applied between about 10 and about 20 seconds.
- 53. The method according to claim 34, wherein the corrosion inhibitor solution comprises between about 0.01 wt.% and about 0.50 wt.% corrosion inhibitor and deionized water.
- 54. The method according to claim 34, wherein the corrosion inhibitor is selected from the group of benzotriazole, 5-methyl-1-benzotriazole, and combinations thereof.